

WHAT IS CLAIMED:

- 1 1. An induction liquid pump, comprising:
 - 2 a. a power unit mountable to a first surface of a tank side wall or bottom, said
 - 3 power unit including a power induction unit to produce a variable magnetic
 - 4 field; and
 - 5 b. a submersible circulation unit mountable to a second surface of the tank side
 - 6 wall or bottom, opposite said power unit, said circulation unit including a
 - 7 circulation induction unit to agitate a surrounding liquid in response to said
 - 8 variable magnetic field when said power unit and said circulation unit are
 - 9 mounted.
- 1 2. The induction liquid pump according to claim 1, wherein said power induction unit has
- 2 a non-movable stator and said circulation induction unit has a rotor that moves in
- 3 response to said variable magnetic field produced by said stator.
- 1 3. The induction liquid pump according to claim 2, wherein said non-movable stator has a
- 2 plurality of coils wrapped around a corresponding plurality of metallic cores, and said
- 3 rotor is a permanent magnet.
- 1 4. The induction liquid pump according to claim 3, wherein said rotator is a rotatable
- 2 permanent magnet having a plurality of poles spaced according to said plurality of
- 3 wrapped coils of said stator.
- 1 5. The induction liquid pump according to claim 2, wherein said rotor is a rotatable
- 2 permanent magnet having at least two poles.
- 1 6. The induction liquid pump according to claim 5, wherein said non-movable stator has a
- 2 plurality of coils wrapped around a corresponding plurality of metallic cores, and said

3 rotor is a rotatable permanent magnet having a plurality of poles corresponding to each
4 of said plurality of wrapped coils of said stator.

1 7. The induction liquid pump according to claim 1, wherein said power unit is removably
2 attached to the first surface of the tank side wall or bottom by at least one fixation unit
3 and said circulation unit is removably attached to the second surface of the tank side
4 wall or bottom, opposite said power unit, by at least one fixation unit.

1 8. The induction liquid pump according to claim 1, further comprising:
2 a first plurality of fixation units attached to said power unit and attaching said
3 power unit to the first surface of the tank side wall or bottom; and
4 a second plurality of fixation units attached to said circulation unit and attaching
5 said circulation unit to the second surface of the tank side wall or bottom, opposite said
6 power unit,
7 wherein said second plurality of fixation units maintains alignment of said
8 circulation unit with respect to said power unit.

1 9. The induction liquid pump according to claim 8, wherein said first plurality of fixation
2 units has at least one permanent magnet attached to said power unit.

1 10. The induction liquid pump according to claim 8, wherein said first plurality of fixation
2 units has at least one suction cup attached to said power unit.

1 11. The induction liquid pump according to claim 8, wherein said first plurality of fixation
2 units has at least one permanent magnet attached to said power unit and one suction cup
3 attached to said power unit, and said second plurality of fixation units has at least one
4 permanent magnet attached to said circulation unit and at least one suction cup attached
5 to said circulation unit.

1 12. The induction liquid pump according to claim 1, wherein said power induction unit has
2 a non-movable stator to produce said variable magnetic field, said circulation induction
3 unit further having:

4 a body casing defining an interior partition member;

5 a rotor mounted to said partition member and moving in response to said
6 variable magnetic filed produced by said stator; and
7 an impeller unit movably connected to said rotor by way of a rotation axis member,
8 wherein said impeller unit agitates the surrounding liquid in response to movement of
9 said rotor.

1 13. The induction liquid pump according to claim 1, wherein said power induction unit has
2 a non-movable stator to produce said variable magnetic field, said circulation induction
3 unit further comprises:

4 a body casing; and

5 a rotor mounted to said body casing and moving in response to said variable
6 magnetic filed, wherein said rotor is attached to a plurality of blades that agitate the
7 surrounding liquid during movement of said rotor.

1 14. The induction liquid pump according to claim 1, wherein said power induction unit is
2 electrically connected to a household power supply by a power cord, said power
3 induction unit having

4 at least one electrically conductive power coil that produces said varying
5 magnetic field in response to power received from said power cord, and

6 said circulation induction unit having at least one electrically conductive
7 circulation coil that produces power to move an impeller unit in response to said
8 varying magnetic field generated by said power coil.

- 1 15. The induction liquid pump according to claim 14, said circulation induction unit further
2 comprising:

3 an electric motor receiving electrical current from said electrically conductive
4 circulation coil and rotating a rotational axis in response; and

5 an impeller unit rotatably connected to said rotational axis thereby agitating the
6 surrounding liquid.

- 1 16. The induction liquid pump according to claim 14, said circulation induction unit further
2 comprising:

3 an impeller assembly having a permanent magnet attached to a plurality of
4 impeller blades; and

5 at least one pole plate to direct magnetic flux from said circulation coil to said
6 permanent magnet of said impeller assembly to induce rotation.

- 1 17. An induction liquid pump, comprising:

2 a power unit comprising at least one electrically conductive power coil disposed
3 within a power unit body casing, wherein said power coil produces a varying magnetic
4 field in response to received electrical power; and

5 a circulation unit comprising at least one circulation coil disposed within a
6 circulation unit body casing, said circulation coil producing power to rotate an impeller
7 assembly in response to said varying magnetic field generated by said power coil.

- 1 24. The induction liquid pump according to claim 17, further comprising a flexible washer
2 covering a front surface of said power unit such that when said power unit is
3 attached to a flat surface said flexible washer absorbs vibration.
- 1 25. The induction liquid pump according to claim 17, further comprising a flexible washer
2 covering a front surface of said circulation unit such that when said circulation unit is
3 attached to a flat surface said flexible washer absorbs vibration.
- 1 26. A magnetic scrubber, comprising:
2 a. a power unit having a power unit body casing and a power induction unit,
3 wherein said power induction unit produces a magnetic field in response to
4 supplied power; and
5 b. a pad unit having at least one piece of ferrous or any other magnetic material
6 that moves in response to the magnetic field produced by said power induction
7 unit.
- 1 27. The magnetic scrubber according to claim 26, wherein said power unit is held against a
2 first surface of a tank side wall or bottom by an operator and said movable pad unit is
3 held against a second surface of the tank side wall or bottom by way of magnetic
4 attraction of said movable pad unit to said magnetic field produced by said power
5 induction unit.
- 1 28. The magnetic scrubber according to claim 26, said power induction unit having an
2 electric motor that rotates at least one magnet to thereby produce a variable magnetic
3 field in response to power supplied from a source of electrical power, wherein said pad
4 unit rotates in response to rotation of said magnet.

- 1 29. The magnetic scrubber according to claim 26,
- 2 said power unit having a first plurality of fixation units that produce a
- 3 corresponding plurality of localized magnetic fields, and
- 4 said pad unit comprising a second plurality of fixation units that are attracted to
- 5 the localized magnetic fields produced by said first plurality of fixation units.
- 1 30. The magnetic scrubber according to claim 26, wherein
- 2 said power unit is held against a first surface of a tank side wall or bottom by an
- 3 operator,
- 4 said pad unit is held against a second surface of the tank side wall or bottom by
- 5 way of magnetic attraction of said pad unit to said magnetic field produced by said
- 6 power induction unit, and
- 7 said pad unit having a rotatable pad section that rotates to scrub the second
- 8 surface of the tank side wall in response to rotation of said at least one piece of ferrous
- 9 or other magnetic material.
- 1 31. The magnetic scrubber according to claim 26, wherein
- 2 said power unit is held against a first surface of a tank side wall or bottom by an
- 3 operator,
- 4 said pad unit is held against a second surface of the tank side wall or bottom by
- 5 way of magnetic attraction of said pad unit to the magnetic field produced by said
- 6 power induction unit, and

7 said at least one piece of ferrous or other magnetic material is sealed in a water
8 impermeable material and induces agitation of said pad unit to scrub the second side of
9 the tank side wall or bottom.

1 32. The magnetic scrubber according to claim 26, wherein
2 said power induction unit has at least one electromagnet and a control unit which
3 produce a variable magnetic field in response to the power supplied from a source of
4 electrical power, and
5 said pad unit moves in response to said variable magnetic field.

1 33. The magnetic scrubber according to claim 26, wherein
2 said power induction unit having a plurality of electromagnets and a control
3 unit, said control unit having at least one control surface by which the user may control
4 the force of magnetic attraction created by said power unit electromagnet in response to
5 power supplied from a source of electrical power, and
6 said pad unit moves in response to variations in the polarity of said power
7 induction unit plurality of electromagnets.

1 34. The magnetic scrubber according to claim 26, wherein
2 said power induction unit includes at least one electromagnet and at least one
3 control unit,
4 said control unit varies the force of magnetic attraction created by said power
5 unit at least one electromagnet in response to power supplied from a source of electrical
6 power, and
7 said pad unit moves in response to variations in the force of magnetic attraction
8 created by said power induction unit at least one electromagnet.

- 1 35. The magnetic scrubber according to claim 26, wherein
2 said power induction unit having at least two electromagnets and at least one
3 control unit,
4 said control unit varies the magnetic polarity created by said at least two
5 electromagnets in response to power supplied from a source of electrical power, and
6 said at least one piece of ferrous or other magnetic material moves in response
7 to variations in the magnetic polarity created by said at least two electromagnets.
- 1 36. The magnetic scrubber according to claim 26, wherein said pad unit is positively
2 buoyant.
- 1 37. The magnetic scrubber according to claim 26, wherein said at least one piece of ferrous
2 or other magnetic material is encapsulated by a water impermeable material.
- 1 38. The magnetic scrubber according to claim 26, wherein said power induction unit
2 receives power from a power cord.
- 1 39. The magnetic scrubber according to claim 26, wherein said power induction unit
2 receives power from a battery.
- 1 40. The magnetic scrubber according to claim 26, wherein said power induction unit
2 receives power from a power cord and transformer.
- 1 41. The magnetic scrubber according to claim 26, wherein said power induction unit
2 receives power from a power cord through a ground fault interrupting switch or fuse.